

Some factors determining the elastic expansion and...

S/123/62/000/016/008/013
A004/A101

fine-grained clay powders varies from 0.370 to 0.715 relative to the total air volume in the filled-in charge. This dimensionless magnitude was called the coefficient of pressed-in air (K_p). The air displacement up to 85 - 95% during the pressing of fine-grained clay powders stops at a pressure in the range of 5 - 20 kg/cm². With an increased humidity of the press powder the necessary pressing pressure is reduced, while the volume of displaced air is increased. As a result of the investigations it was found that, with good surface conditions and sufficient rigidity of the press mold at the moment of ejection, cracks do not originate, while the evacuation of air from the powder is of practical interest in solving problems connected with an improvement in quality of ceramic articles and raising the efficiency of the equipment.

T. Kislyakova

[Abstracter's note: Complete translation]

Card 2/2

BALKEVICH, V.L., kand.tekhn.nauk; POPIL'SKIY, R.Ya., kand.tekhn.nauk

Ceramic materials of a high alumina content and their use in the
national economy. Zhur. VKHO 5 no. 2:148-155 '60.

(MIRA 14:2)

(Ceramic materials)

KONDRASHEV, F.V.; POPIL'SKIY, R.Ya.

Methods for measuring the pressure of the air content in and the
elastic expansion of ceramic raw materials. Stek.l ker. 17 no.3:
29-33 Mr '60. (MIRA 13:6)
(Ceramics)

15.2000

1454, 1153, 1155

89691

S/131/61/000/003/001/001
B105/B206

AUTHORS: Vinogradova, L. V., Makarova, T. S., Rutman, D. S.,
Poluboyarinov, D. N., Popil'skiy, R. Ya., Serova, G. A.

TITLE: Manufacture of sintered ceramics from magnesium oxide

PERIODICAL: Ogneupory, no. 3, 1961, 123-124

TEXT: This article describes the process of manufacturing thin-walled, sintered crucibles and shield tubes for thermocouples from magnesium oxide. This process was elaborated at the Podol'skiy zavod ogneupornykh izdeliy (Podol'sk Plant for Refractories) jointly with the kafedra keramiki (Department of Ceramics) of the Khimiko-tekhnologicheskii institut im. Mendeleyeva (Institute of Chemical Technology imeni Mendeleyev). The crucibles are intended for metal smelting. The initial material was commercial magnesium oxide with a content of ~98% MgO, the preparation of which (firing temperature and mode of crushing) was worked out according to previous studies. Commercial magnesium in powdery form is first fired in molds at 1300°C and then finely ground in a vibrating mill by means of steel balls. The powder was plasticized by

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Manufacture of sintered ceramics ...

89691

S/131/61/000/003/001/001
B105/B206

means of paraffin with an addition of oleic acid. The shaping of crucibles and shield tubes for thermocouples from magnesium oxide by the "freezing-on" method permits the manufacture of products with a wall thickness of 5-0.3 mm. After partial burning out of the paraffin at a temperature of about 200°C, the products were fired in a regenerative medium (H₂) at 1700°C in an electric furnace with a molybdenum coil.

The firing time was 5 to 6 hr (2 hr in the high-temperature zone). After sintering, the average weight by volume of the products was 3.36 to 3.38 g/cm³, and their apparent porosity 0 to 0.4%; the white products showed good translucence. Pyrometric ceramics produced from magnesium oxide in the form of shield tubes for thermocouples and capillary tubes, permits temperature measurement up to more than 2000°C. The relatively simple process permits the manufacture of products for use at high temperatures, the waste being very small. There are 1 figure and 1 Soviet-bloc reference.

ASSN: Podol'sk PLANT for Refractories - Vinogradova, L.V., MAKAROVA, T.S.,
RUTMAN D.S.
Card 2/2 ~~CL~~ Inst. Chem. Technology im Mendeleev - Poluboyarinov D.N.,
Popil'skiy R. Ya., SEROVA G.A.

POLUBOYARINOV, D.N.; POPIL'SKIY, R.Ya.; TSZYAN DUN-KHUA [Chiang Tung-hua]

Effect of the preliminary thermal processing and vibrogrinding
of magnesium oxide on its degree of dispersion, hydration, and
caking. Ogneupory 26 no. 2:80-86 '61. (MIRA 14:2)
(Magnesium oxide)

S/131/62/000/004/001/002
B105/B101

15.2730

AUTHORS: Poluboyarinov, D. N., Popil'skiy, R. Ya., Chiang Tung-hua

TITLE: Effect of some admixtures on sintering and properties of highly refractory periclase ceramics

PERIODICAL: Ogneupory, no. 4, 1962, 178 - 184

TEXT: The effect of a number of admixtures on sintering, microstructure and some properties of periclase ceramics on the basis of various types of initial magnesium oxide was studied. Attention was chiefly devoted to the heat-resistance increase of sintered periclase ceramics. The effect of admixtures was studied for two initial materials: (1) magnesium oxide, burned at 1300°C and ground for 60 min; (2) molten magnesium oxide, ground for 60 min. TiO_2 and Fe_2O_3 (0.5, 1, 2 and 4%) as well as Al_2O_3 and ZrO_2 (1, 2, 4 and 8%) were used as admixtures. Admixtures of commercial alumina of the type Γ -0 (G-0), burned at 1450°C, as well as unstabilized commercial zirconium dioxide (98% ZrO_2 + HfO_2), burned at 1700°C, were introduced in amounts of 1, 2, 4 and 8%. The admixtures were dry-ground with magnesium
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3/131/62/000/004/001/002
B105/B101

Effect of some ...

oxide on the vibration mill of the type M-10 (M-10) for 1 hr. The samples were plasticized with water, pressed and burned in a kerosene furnace at 1400, 1500, 1600, 1700 and 1750°C for 2 hr. X-ray and petrographic analyses showed that new formations in the mass of pure magnesium oxide with admixtures of 8% Al_2O_3 represent spinel ($MgO \cdot Al_2O_3$). The following was

tested: bending strength, modulus of elasticity, volume weight, dimensions of periclase crystals, and linear thermal expansion coefficient (α).

Results: (1) The two types of MgO produced almost identical results; (2) TiO_2 , Fe_2O_3 and Al_2O_3 lower sintering temperature, bending strength and modulus of elasticity; (3) best admixtures for the purpose of lowering the sintering temperature are 2.4% for TiO_2 and Fe_2O_3 ; 4% for Al_2O_3 ; (4) ZrO_2

admixture (4%) had a useful effect only with molten MgO; (5) up to $\approx 1850^\circ C$, no deformation set in below 2 kg/cm²; (6) effect of admixtures on α was negligible; (7) enlargement of the periclase crystals and increased heat resistance occurred especially in the case of Al_2O_3 admixture. The pro-

duction of sintered periclase ceramics of increased heat resistance with admixtures of 4-8% Al_2O_3 , which simultaneously lower the sintering

Card 2/3

L'25159-65 EWP(e)/EPA(s)-2/EWT(m)/EPF(n)-2/EPR/EPA(w)-2/T/EWP(t)/EWP(b) Pab-10/
Ps-4/Pt-10/Pu-4 IJP(c) JD/WH

ACCESSION NR: AP5001301

S/0131/64/000/012/0556/0565,

AUTHOR: Galkina, I. P.; Popil'skiy, R. Ya.

TITLE: Sinterability, phase composition and microstructure of ceramics based on
MgO - MgO-alumina

SOURCE: Ogneupory, no. 12, 1964, 556-565

TOPIC TAGS: magnesite, alumina, sintering, ceramic phase composition, ceramic
microstructure, spinel, periclase

ABSTRACT: Sintering experiments were carried out in an electric Kryptol resistance furnace with a series of binaries from the $MgO : Al_2O_3$ system in order to determine their chemical stability, heat resistance and other qualities as refractories. Various compositions of spinel, periclase, alumina and magnesite were tested after different heat and pressure treatments had been applied to the powders having various grain sizes and degrees of dispersion. Chemical reactions, degree of caking and recrystallization were recorded during such treatment in a vacuum and also in helium and other gas media. All such compositions (except pure spinel) caked at 1600C in the Kryptol furnace; in a vacuum magnesium oxide began to evaporate at 1700C, but spinel proved considerably less volatile and caked at this temperature. Chemical and x-ray analyses showed that practically no MgO or Al_2O_3 1/2

L 25159-65

ACCESSION NR: AP5001301

remained in samples fired to 1500 or 1600C, which indicates complete spinelization. It was found that compounds ranging between pure spinel and pure periclase sintered at lower temperatures and were more compact than the pure forms, producing particularly hard solid solutions. Spinel synthesis, however, causes sharp variations during hot working of larger shapes, which leads to stresses, deformation and cracking. This can only be avoided by combining periclase with pre-synthesized spinel. "Chemical analyses of the samples were carried out at the NIITsement; the x-ray structural analyses were performed at the VNIINSM; and the petrographic studies were carried out under the direction of T. V. Yefimovskaya." Orig. art. has: 8 figures and 3 tables.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskii institut im. D. I. Mendeleeva
(Moscow chemical engineering institute)

SUBMITTED: 00

ENCL: 00

SUB CODE: MT

NO REF SOV: 016

OTHER: 004

Card 2/2

L 22641-65 EWP(e)/EPA(s)-2/ELT(m)/EPF(n)-2/EPR/EPA(w)-2/EWP(t)/EWP(b) Pub-10/
 Ps-4/Pt-10/Pu-4 IJP(c) JD/WH
 ACCESSION NR: AP4022717 S/0020/64/155/002/0326/0329 **57**
58
B

AUTHOR: Popil'skiy, R. Ya.; Pankratov, Yu. F.; Koyfman, N. M.

TITLE: Formation of a nonporous structure in polycrystalline corundum

SOURCE: AN SSSR. Doklady, v. 155, no. 2, 1964, 326-329

TOPIC TAGS: corundum, polycrystalline corundum, corundum structure, dense structure, sintered corundum ceramic, heat resistant oxide, corundum ceramic

ABSTRACT: This is a discussion of some factors which have an effect upon attaining maximum relative density in polycrystalline corundum ceramics. The basic experiments were conducted on high-purity materials (with overall impurity content of 0.1% and below) which were prepared by purification of type G-00 commercial alumina or analytical-grade aluminum oxide. The materials were heat-treated for complete conversion of the alumina into the α -form with subsequent grinding to a specific surface of 3 to 4 m²/gram (average grain size 0.5 μ). Sintering was carried out at 1600-1900C with a holding period of 2-20 hrs in a conventional atmosphere of a gas furnace and in helium, hydrogen, or vacuum of $1 \cdot 10^{-4}$ mm Hg, with or without addition of magnesium oxide. A magnesium oxide modifier added to

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L 22641-65

ACCESSION NR: AP4022717

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the alumina very effectively retards the corundum crystal growth and augments the density and mechanical properties of the corundum ceramic. The effect of the gaseous medium on the final densification stage, i.e., after the pores have been closed, is particularly great. In the case where there are no MgO admixtures, the relative density does not go beyond 0.965. Microscopic tests showed that in this case there is a rapid growth and a preferred extended form of the corundum crystals, which reach 2 to 3 mm in size. When MgO is added, crystals of a more isometric form, characterized by a slow increase in size with rise in temperature and prolongation of sintering, are formed in all cases. The relative density of these samples is much higher than in those samples without additions. A relative density above 0.99 and elimination of visible pores in the cut-out sections was attained only when the sintering was carried out in vacuum or hydrogen. Sintering at 1600C is not the final stage of pore closing, but an MgO addition increased the density of the samples sintered at this temperature. It can thus be assumed that the porosity-lowering effect of MgO is manifested as early as the initial recrystallization period. "T. B. Yefimovskaya and T. S. Sil'vestrovich participated in this work." Orig. art. has: 1 figure and 1 table.

Card 2/3

L 22641-65

ACCESSION NR: AP4022717

ASSOCIATION: Nauchno-issledovatel'skiy institut elektrovakuumnogo stekla
(Scientific Research Institute for Electrovacuum Glass)

SUBMITTED: 01 Nov 63

ENCL: 00

SUB CODE: MT

NO REF SOV: 009

OTHER: 005

Cord 3/3

GALKINA, I.P.; POPIL'SKIY, R.Ya.

Certain properties of highly refractory ceramics in the
system $\text{MgO} - \text{MgAl}_2\text{O}_4$. Ogneupory 30 no.6:33-39 '65.
(MIRA 19:1)

1. Moskovskiy khimiko-tekhnologicheskii institut imeni
Mendeleeva.

L 06499.67 EWT(m)/EWP(*) WH

ACC NR: AP6028302

SOURCE CODE: UR/0363/66/002/006/1115/1118

AUTHOR: Poluboyarinov, D. N.; Popil'skiy, R. Ya.; Galkina, I. P.; Bakunov, V. S.

ORG: Moscow Chemical Engineering Institute im. D. I. Mendeloyev (Moskovskiy khimiko-tekhnologicheskii institut)

TITLE: Creep¹⁵ of ceramic materials in the MgO-MgAl₂O₄ system

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 6, 1966, 1115-1118

TOPIC TAGS: creep mechanism, oxide ceramic, magnesium compound, aluminum compound

ABSTRACT: The mechanism of creep and deformation under load in the periclase-spinel system was studied. The creep rate was measured as a function of temperature and load, and the empirical creep law $\dot{\epsilon} = Se^{-Q/RT} \sigma^n$ was found to hold, $\dot{\epsilon}$ being the deformation rate, Q the activation energy, R the gas constant, T the temperature, and S and n empirical constants. The lowest creep rates were exhibited by spinel and periclase: when MgO admixtures are introduced into spinel and spinel admixtures into MgO, the creep rate increases, and in the range of 14-63 wt. % Al₂O₃ becomes equal to or greater than that of the pure components. The dependence of the deformation rate of the materials studied on the stress approximately obeys the law for viscous flow. The mechanisms of deformation under load at high temperatures and of creep at lower temperatures are similar. Orig. art. has: 5 figures and 2 tables.

Card 1/2

UDC: 546.46-31+546.46*623

L 06489-67

ACC NR: AP6028302

SUB CODE: 11,20/SUBM DATE: 21Apr65/ ORIG REF: 005/ OTH REF: 003

Card 2/2 *h2c*

ACC NR: AT6036930

SOURCE CODE: UR/0000/66/000/000/0082/0091

AUTHORS: Nishanova, I. Ye.; Popil'skiy, R. Ya.; Guzman, I. Ya.

ORG: none

TITLE: Manufacture of quartz glass articles by using methods employed in ceramics technology

SOURCE: Nauchno-tekhnicheskoye obshchestvo chernoy metallurgii. Moskovskoye pravleniye. Vysokoogneupornyye materialy (Highly refractory materials). Moscow, Izd-vo Metallurgiya, 1966, 82-91

TOPIC TAGS: quartz, glass, oxide ceramic, ceramic pressing, ceramic technology

ABSTRACT: The possibility of obtaining articles made of quartz glass by employing ceramic methods was investigated. The investigation is an extension of the work of I. Fleming (Am. Cer. Soc. Bull., 1961, 40, No. 12, 748--750). The initial material consisted of 99.44% SiO_2 . The material was pulverized and had a specific surface area of 40 000 cm^2/g . The specific surface area was determined after the method of D. S. Sominskiy and G. S. Khodakov (Nauchnyye soobshcheniya VNIINSMa; 1957, No. 29). The powder was compressed at a pressure of 800 kg/cm^2 and was fired at 1150--1350C. The porosity, shrinkage, density, and strength limit of the specimens were determined. The experimental results are summarized in graphs and tables

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ACC NR: AT6036930

(see Fig. 1). It was found that the quality of the specimens depended on the grain

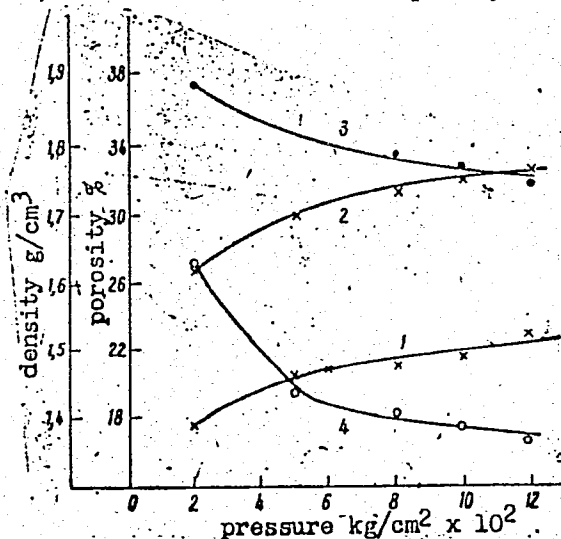


Fig. 1. Change in density of specimens as a function of the compression stress. 1 - density before firing; 2 - density after firing; 3 - porosity before firing; 4 - porosity after firing

size of the initial powder. Best results were obtained using very fine powders of micron diameters. It is concluded that quartz glass objects may be manufactured using ceramics technology methods. Orig. art. has: 5 tables and 2 graphs.

SUB CODE: 11,13 SUBM DATE: 02Nov65/ ORIG REF: 007/ OTH REF: 007

Card 2/2

ACC NR: AT6036935

SOURCE CODE: UR/0000/66/000/000/0123/0111

AUTHOR: Popil'skiy, R. Ya.

ORG: none

TITLE: Simulating the compression process of semi-finished products (brick clay) in developing the technology of refractory products

SOURCE: Nauchno-tekhnicheskoye obshchestvo chernoy metallurgii. Moskovskoye pravleniye. Vysokoogneupornyye materialy (Highly refractory materials). Moscow, Izd-vo Metallurgiya, 1966, 123-141

TOPIC TAGS: clay refractory product, refractory product, simulation, pressure simulation, environment simulation

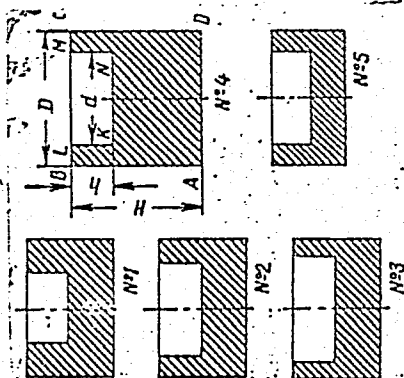
ABSTRACT: The factors determining the correct laboratory simulation of compression processes used in the manufacture of intermediate products from powdered materials were investigated. The factors discussed are: 1) nature and preliminary treatment of powder, 2) ratio of height of compressed object to hydraulic radius $\frac{h}{R}$, for "equal height" objects, 3) the redistribution coefficient ω

$$\omega = \frac{K-1}{K} \cdot \frac{v}{V}$$

where K is the compression coefficient, v - the volume of the cavity in a non-equal-Card 1/3

ACC NR: AT6036935

height object (see Fig. 1), and V - the total volume of the initial material



Number of mold	$D, \mu m$	$d, \mu m$	$H, \mu m$	$h, \mu m$	α
1	60	30	40	20	0.062
2	60	40	40	20	0.111
3	60	45	40	20	0.140
4	60	40	60	20	0.074
5	60	40	33	20	0.133

Fig. 1. Size and characteristics of specimens having different configurations

(cylinder ADCD in Fig. 1), and the residual air in the powdered material. It is concluded that correct laboratory simulation of actual compression processes encountered in the industrial manufacture of products from powdered materials is possible, provided that the following precautions are observed: 1) the initial powder is prepared in a similar manner as is employed in industry; 2) for "equal height" objects, the laboratory specimen has the same value of the ratio $\frac{h}{R}$ as the industrial product; 3) for "non-equal-height" objects, the laboratory specimen has the same value of redistribution coefficient as the industrial product, 4) the degree

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ACC NR: AT6036935

of residual air in both the laboratory specimen and industrial product is identical.
Orig. art. has: 1 table, 6 graphs, and 11 equations.

SUB CODE: 13, 02 11 / SUBM DATE: 02Nov65/

ORIG REF: 030/

OTH REF: 001

Card 3/3

REMPEL', A.M.; SURKOV, F.V.; POPIL'SKIY, R.Ya.; nauchn. red.

[Industry's requirements as to the quality of mineral raw materials; a handbook for geologists] Trebovaniia promyshlennosti k kachestvu mineral'nogo syr'ia; spravochnik dlia geologov. Moskva, Nedra. No.64. 1966. 62 p. (MIRA 18:9)

1. Moscow: Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ia.

KONDRASHEV, F.V., inzh.; POPIL'SKIY, R.Ya., kand. tekhn. nauk

Elastic expansion, pressing of air, and effectiveness of
deaeration during molding of ceramic wares. Stek. i ker. 21
no.1:17-22 Ja '64. (MIRA 17:8)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut stroitel'noy
keramiki (for Kondrashev). 2. Moskovskiy khimiko-tekhnologicheskoy
institut imeni D.I. Mendeleeva (for Popil'skiy).

L 57017-65 EWT (e)/EPA(e)-2/EWT(m)/EWP(i)/EPA(w)-2/T/EWP(b) Pub-10/Pt-7 WE

ACCESSION NR: AP5015875

UR/0131/65/000/006/0033/0039
666.856

36/
35/
b

AUTHOR: Galkina, I. P.; Popil'skiy, R. Ya.

TITLE: Certain properties of super-duty ceramic refractories in the MgO-MgAl₂O₄ system

SOURCE: Ogneupory, no. 6, 1965, 33-39

TOPIC TAGS: ceramic refractory, super duty refractory, periclase, spinel, high temperature vacuum furnace, alumina content, magnesium oxide

ABSTRACT: The present work is a continuation of an earlier investigation by the authors (Ogneupory, 1964, No. 12), which was concerned with the sinterability, phase composition, and microstructure of super-duty ceramic refractories in the MgO-MgAl₂O₄ system, whereas the present article deals with the physico-technical properties of the same compounds, determining their usefulness at high temperatures. The investigations were chiefly centered on specimens fired at optimal sintering temperatures: 1710°C for periclase and spinel and 1600°C for compounds with an intermediate composition. Flexural, compressive, and tensile

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L 59017-65

ACCESSION AP5015875

strength tests of the specimens of 17 different compounds of this kind with different $\text{MgO}:\text{Al}_2\text{O}_3$ ratios (from 1:1 to 64:1) and different Al_2O_3 content (up to 1.7%) were performed both at room temperature and at high temperatures (up to 1450°C) in a setup consisting of a Silit-heater furnace and a loading machine. In addition, the evaporation rate of these materials was investigated in a high-temperature vacuum furnace with a tungsten heater, in a vacuum of the order of 10^{-4} mm Hg at 1800 and 2000°C. Deformation under load was investigated in a specially developed high-temperature furnace in which tests could be performed at temperatures of as much as 2500°C. It was found that compounds containing up to 15% Al_2O_3 , particularly those of the spinel type, make it possible to markedly improve the temperature resistance of periclase ceramics while simultaneously reducing the sintering point. Spinel and related compounds have lower evaporation rates than periclase and thus the corresponding ceramic materials with predominance of spinel are suitable for use at higher temperatures even though periclase is greatly superior in deformation temperature to spinel. The temperature limits of the reliability of periclase ceramics, particularly in vacuum, are restricted by the high vaporizability of magnesium oxide rather than by the thermomechanical and refractory properties of these ceramics. Intermediate compounds containing from 20 to 50% Al_2O_3 do not appear to be of

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L 57017-65

ACCESSION NR: AP5015875

practical interest as super-duty ceramic refractories. Orig. art. has: 4 figures, 4 tables, 20 references.

ASSOCIATION: Moskovskiy khimiko-tehnologicheskii institut im. D. I. Mendeleyeva
(Moscow Chemical Technology Institute)

SUBMITTED: 00

ENCL. 00

SUB. CODE: MT,MM

NO. REF SOV: 015

OTHER: 006

df
Cord

3/3

GALKINA, I.P.; POPIL'SKIY, R.Ya.

Sinterability, phase composition and microstructure of ceramics in the
system $\text{SiO}_2 - \text{MgAl}_2\text{O}_4$. Ogneupory 29 no.12:556-565 '64. (MIRA 18:1)

1. Moskovskiy khimiko-tekhnologicheskii institut im. D.I.Mendele-
yeva.

L h2391-65 EWP(e)/EPA(s)-2/EWT(m)/EPF(c)/EWP(i)/EPF(n)-2/EPR/EPA(w)-2/EWP(t)/
EPA(bb)-2/EWP(b) Pab-10/Pr-L/PS-L/Pt-7/Pu-L WH/WJ/JD

ACCESSION NR: AR5006357

S/0081/64/000/024/M003/M004

SOURCE: Ref. zh. Khimiya, Abs. 24M25

AUTHOR: Koshelev, Yu. S.; Balkevich, V. L.; Popil'skiy, R. Ya.

TITLE: Control of sintering of corundum ceramics by introducing additives by the method of impregnation with salt solutions

CITED SOURCE: Tr. Mosk. khim.-tekhnol. in-ta im. D. I. Mendeleeva, vyp. 46, 1964, 56-58

TOPIC TAGS: ceramic coating, ceramic casting, corundum

ABSTRACT: Experiments are described on introducing additives in molecularly dispersed form into corundum pastes by means of impregnation. Samples of paraffined paste for impregnation were prepared by the method of casting under pressure. An aluminum salt was used for the impregnation which decomposes to Al_2O_3 on heating and remains in the pores of the sample. The impregnation was produced by single stage boiling of the calcined samples in a saturated solution of aluminum-ammonium alum for one hour. The samples were dried at 250° . After impregnation the samples

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ACCESSION NR: AR5006357

were fired at 1710°. The main effect of impregnation was a considerable reduction in shrinkage of the samples. Experiments on the introduction of mineralizing additives (TiO_2 , MnO_2 , MgO) by impregnation with dissolved salts showed the presence of additional shrinkage of the fired samples. (G. Gerashchenko)

SUB CODE: MT

ENCL: 00

Card 2/2 *grr*

POPIL'SKIY, R.Ya.

"Achievements in the production of refractories" G.I. Fainberg, M.A.
Lifshits. Reviewed by R.IA. Popil'skii. Ogneupory 28 no. 2:96 3 of cover
'63. (MIRA 16:2)
(Refractory materials) (Fainberg, G.I.) (Lifshits, M.A.)

EXCERPTA MEDICA Sec 13 Vol 13/12 Dermatology Dec 59

3304. GASTRIC SYPHILIS (Russian text) - Popilyuk P. F. - VRACH. DELO
1957, 8 (869-870)

Two cases of gastric syphilis are described. In one patient the diagnosis of syphilitic ulcer of the stomach was made on signs of neurosyphilis and aortitis and successful healing of the ulcer under the influence of specific therapy. The patient was admitted to the hospital on account of a sudden haematemesis. On examination a mild systolic murmur over the aorta, and an accentuated second sound over the aorta were noted; roentgenologically a niche was revealed on the lesser curvature of the stomach. Free HCl of the gastric secretions was 4-20, arterial blood pressure was 170/95 mm. Hg, and red cell sedimentation rate was 46 mm. in 1 hour. Argyll-Robertson pupils were present, and serologic tests for syphilis were strongly positive. The initially administered anti-peptic-ulcer therapy proved ineffectual. In the other case metasyphilitic lesions of the stomach of the linitis plastica type were diagnosed in a 15-year-old girl who had suffered from constant epigastric pain for the last 6 yr. The diagnosis was based on positive Wassermann, Kahn, and Sachs-Vitebsky serologic tests, and on typical roentgenologic findings: small stomach, absence of peristalsis and a wide-open pylorus. The author emphasizes that besides the past history, multivisceral lesions (aortitis, neurosyphilis) as well as the atypical clinical picture are of importance for the diagnosis of gastric syphilis. One must consider the lowered secretory function of the stomach, the efficacy of antisyphilitic therapy (which, as a rule, tends to aggravate the symptoms of gastric diseases other than syphilis), positive serologic tests and Argyll-Robertson pupils.

POPINCEANU, N., prof.; SERBAN, D., ing.; SERBAN, Gh., ing.

Contributions to the determination of the efficiency of toothed
wheel gears made of plastics. Constr mas 15 no.10:679-683 0 '63.

1. Polytechnic Institute, Iasi.

POPINCEANU, N.

Handwritten: Mac
Duc

Improvement of the efficiency of heat exchangers and steam generators. N. Popinceanu and N. Popinceanu, Bul. inst. politech. Iasi 2, 147-54 (1958). Replacement of the conventional cylindrical piping of heat exchangers and steam generators with ones having undulated cross sections resulted in a 17.13% increase in efficiency, while the over-all dimensions and the rate of fluid flow are kept const. It is expected that the resistance of such pipes against external pressures will be higher.

Francis Kertesz

Handwritten: 23
1-4E46

Handwritten: KSS

POPINCEANU, Nicolaie, prof.

Toothed wheels made of plastic materials. Metalurgia constr mas 14,
no.11:1027-1033 N '62.

1. Institutul politehnic, Iasi.

POPINCEANU, N.G.; GAFITANU, M.D.

Contribution to the designing and economic construction of
toothed wheels. Studii cerc mec apl 14 no.2:385-401 '63.

1. Institutul Politehnic, Iasi (for Gafitanu).

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' 60.

1. Pracownia Biochemii Patologicznej Instytutu Biochemii i Biofizyki
PAN i Zaklad Chemii Fizjologicznej AM, Gdansk Kierownik: prof. dr
Wl.Mozolowski.

(MALATES toxicol)

(KETO ACIDS blood)

(NITROGEN urine)

SEMIOTROCHEV, V.L.; BARAK, TS.M.; SPITSIN, M.P.; POPINYAN, I.O.;
YERUSHEVA, L.F.; MISALEVA, O.S.

Pasteurellosis in man in Kazalinskiy District of Kzyl-Orda Province.
Zhur. mikrobiol., epid. i immun. 42 no.8:143-144 Ag '65. (MIRA 18:9)

1. Sredneaziatskiy nauchno-issledovatel'skiy protivochumnyy in-
stitut, Alma-Ata.

POPINOVA, A.V., klinicheskiy ordinator

Eliminating the pains in morbid absolute glaucoma. Uch. zap.
GMI no.8:51-53 '59. (MIRA 14:9)

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B.V.Protopopov). (GLAUCOMA)

POPIOLEK, Edward, mgr inż.

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36 no.6:218-222 Jo '64.

1. Experimental Rocket Center of the Krakow Aeroclub.

POPIOLEK, Edward, mgr inż.

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20 no. 2: 67-70 F '64.

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Dzieje hutnictwa zelaznego na ziemiach polskich. Katowice, Drukarnia Gieszynska
pod zarz. panstw., 1947. 136 p. (Pamietnik Instytutu Slaskiego. Seria II, 6)
/History of metallurgy in Poland. index, notes/

East European Vol. 3, No. 3
SO: Monthly List of Russian Accessions, Library of Congress, March 195⁴, Uncl.

POPIOLEK, Kazimierz, prof.

The Silesian Scientific Institute in Katowice City as a humanistic research centre. Nauka polska 10 no.2:103-114 '62.

1. Przewodniczący Prezydium Rady Naukowej, Śląski Instytut Naukowy, Katowice, ul. Francuska 12. Dyrektor Instytutu: doc. Jacek Koraszewski

POPIOLEK, Kazimierz, professor

The Silesian Scientific Institute a centre of the human sciences
in Katowice. Review Pol Academy 7 no.1:59-62 Ja-Mr '62

1. Chairman of the Board of the Scientific Council, Silesian
Scientific Institute, Katowice. Director of the Institute:
Assistant Professor Jacek Koraszewski, Katowice, Francuska 12.

POPIORDANOV, Khar., prof. inzh.; MARKOV, P., inzh.; DASKALOV, P.,
kand na tekhn. nauki, inzh.; MIKHAILOV, St., inzh.

Evaluation of mining systems in relation to the dust factor.
Min delo 18 no.5:14-15 My '63.

1. Minno-geolozhki institut, chlen na Redaktsionnata kolegia,
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Causes of the sinking and falling of rocks and coal blocks from the roofs in the wide coal faces in mines. Godishnik Min geol inst 7:199-219 '60/'61 [publ. '62].

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in underground mining. Min delo 17 no.6:6-8 '62.

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"Minno delo i metalurgii".

POPIORDANOV, Khar., prof. inzh.; PARASHKEVOV, R., inzh.; CHONKOV, T., dots.
inzh.; SEIMENLIISKI, St., inzh.; KONDEV, G., inzh.

The reconstruction of the "9-ti septemvri" Mine of the "Cherno More"
State Mining Enterprise is indispensable. Godishnik Min geol inst 8:
37-43 '61-'62[publ. '63.]

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Study of the systems applied in mining steep, thin, and medium deep layers in the "Bobovdol" State Industrial Enterprise. Godishnik Min geol inst 8:137-159 '61-'62 [publ. '63]

ILIEV, Mikhail, inzh.; POPIORDANOV, Kharalampi, dots, inzh.

Some peculiarities in computing the reinforced-concrete shoring constructions for mines. Stroitelstvo 9 no.2:4-7 '62.

1. St. n. sutrudnik MNII (for Iliev).
2. Dotsent na Minno-geolozhkiia institut (for Popiordanov).

POPIORDANOV, Kharalampi, dotsent, inzh.

Cases of rock impacts in our mines. Tekhnika 10 no.10:28-32 '61.

POPIORDANOV, Kh., dots. inzh.; ILIEV, M., ml. nauch. sutr. inzh.

Analysis of the systems of works applied at the Bistritsa
State Mining Enterprise, region of Kyustendil. Tekhnika
Bulg 11 no.2:58-60 '62.

1. Minno-geolozhki institut, Sofia (for Popiordanov).
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POPIORDANOV, Kh., dots., inzh.; MIKHAILOV, St., inzh., nauchn. sotrudnik

Contribution to the analysis of the industrial accidents in the
mines. Min delo 16 no.12:15-18 '61.

1. Minno-geolozhki institut (for Popiordanov) 2. NIOTPZ (for Mikhailov)

(Mine accidents)

BULGARIA / General Problems of Pathology. Allergy. U

Abs Jour: Ref Zhur-Biol., No 11, 1958, 51543.

Author : Popiranov, R., Doichinova, N.

Inst : Not given.

Title : Precipitation as a Test for Demonstration of
Sensitization. Preliminary Communication.

Orig Pub: S"vrem med. 1957, 8, No 1, 47-51.

Abstract: No abstract.

Card 1/1

19

L 33546-66

ACC NR: AP6023486

SOURCE CODE: CZ/0014/65/000/008/0308/0313

AUTHOR: Popis, A.

ORG: none

TITLE: TESLA ANP 401 "URAN" magnetic tape recorder

SOURCE: Sdelovaci tehnika, no. 8, 1965, 308-313

TOPIC TAGS: tape recorder, magnetic recording tape, transistorized circuit, electronic component/TESLA ANP 401 URAN tape recorder

ABSTRACT: The article describes the TESLA ANP 401 "URAN" magnetic tape recorder, fully transistorized for battery operation. Detailed technical information is given regarding the circuit, components and mechanical parts, and instructions on operation and maintenance are provided. Orig. art. has: 12 figures and 1 table. [JPRS]

SUB CODE: 14, 09 / SUBM DATE: none

Cord 1/1

POPISAKOV, G. (Bulgaria)

Socialist international division of labor and the trade between
member countries of the Council for Mutual Economic Assistance.
Probleme econ 17 no. 4: Supplement: 24-29 Ap '64.

POPISAKOV, Gr. dots.

Council for Economic Assistance. Nauka i tekhnolozhiya 14
no.12:24-25 '62.

L 37253-66 EWT(m)

ACC NR: AP6027883

SOURCE CODE: CZ/0038/66/000/003/0105/0106

AUTHOR: Popisil, Milan

31

B

ORG: Skoda, branch enterprise, Plzen (Skoda, oborovy podnik)

TITLE: Characteristics of Czechoslovak fission chambers

19

SOURCE: Jaderna energie, no. 3, 1966, 105-106

TOPIC TAGS: nuclear fission, nuclear reactor

ABSTRACT: The article presents the results of measurement of a series of neutron fission chambers produced by the Tesla Premysleni plant. The principal attention was given to the characteristics of the chambers when the fed power was reduced (100 volts). It was found that with good stability of the set working point the reactors function well at that voltage. This paper was presented by L. David. Orig. art. has: 3 figures. [JPRS: 36,845]

SUB CODE: 18 / SUBM DATE: none / ORIG REF: 003 / OTH REF: 002

ns
Card 1/1

UDC: 539.12.074.827

POPISIL, R.

ELECTRIC WELDING OF RUSTLESS STEEL. R. Popisil,
(Svarovani, 1948, vol. 8, No. 1, pp. 1-3). (In Czech).
The electric welding of three stainless steels, namely, the
pearlitic 12-16% chromium, the ferritic 16-26% chromium, and
the austenitic 18/9 chromium-nickel types, is described.

Immediate source clipping

POPISIL, Z.

29. Attempt to ascertain the validity of Halshin's Laws of pressing for ceramic materials
Z. Popisil (Silkary, 1, No. 1, 45, 1957). In Czech. The results of the present work
support Halshin's first Law (Powder Metallurgy, Halle, 1954) within the range
14,000-55,300 p.s.i., but do not support his second Law (11 figs., 2 tables)

29

POPISTAS, Alexandros

Radio set with two transistors. St. at Teh. 17 no. 2171 P. 145.

OLTEANU, E.; POPESKO, O.; POPISTEANU, D.

Late results of arthroplasty in tuberculosis of the knee.
Khirurgia 15 no.2/3:254-255 '62.

1. Iz Morski sanatorium Agigea - Rumunlia.
(TUBERCULOSIS OSTEOARTICULAR surg)
(KNEE dis)

TRIFANESCU, Aura, chimist; POPISTEANU, Elena, ing.

Thick greases for greasing the bearings of the railway rolling stock,
Rev cailor fer 10 no.9:469-473 S '62.

POPISTEANU, E. ing.

Use of asbestos cement for the manufacture of the plates indicating
road traffic directions. Rev transport 9 no.1:37-39 Ja '62.

L 64650-65 EWT(m)/EWA(h)
ACCESSION NR: AP5023143

BU/0012/64/007/003/0195/0199

AUTHOR: Ganchev, Mikhail; Penchev, Vladimir; Popits, Robert

TITLE: Measurement of individual doses of x-rays using film dosimetry

SOURCE: Fiziko-matematicheskoe spisanie, v. 7, no. 3, 1964, 195-199

TOPIC TAGS: x ray, radiation dosimetry

Abstract: After explaining the theoretical basis and describing the practical applications of film dosimetry, the authors report that during the periods 15 May - 15 October 1961 and 1 October 1962 - 30 July 1963 they processed 3378 "Adox" films exposed by 200 members of the X-ray personnel at 37 medical institutions. 93.6% showed 1-100 mr monthly doses, 3.4% between 101 and 200 mr, 1.4% between 201 and 400 mr, while 1.6% registered doses in excess of 400 mr. Orig. art. has 2 figures, 5 graphs, and 1 table.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: OP, NP

NO REF SOV: 000

OTHER: 008

JPRS

Card 1/1

GANCHEV, Mikhail; PENCHEV, Vladimir; POPITS, Robert

Measuring individual doses of X-ray radiation by the method of
film dosimetry. Fiz mat spisanie BAN 7 no.3:195-199 '64.

POPIVANOV, D.

"Safety Device for Electric Motors." p. 14 (RATSIONALIZATSIYA. Vol. 4,
No. 10, Oct. 1954; Sofiya, Bulgaria.)

So: Monthly List of East European Accessions, (EEAL), IC, Vol. 4, No. 4,
April 1955, Uncl..

POPIVANOV, Dim., inzh.

Use of radioactive isotopes in mining industries. Tekh delo 13
no.424:2 21 Ap '62.

1. Direktor na Minnia nauchnoizsledovatel'ski institut.

POPIVANOV, D.

"Utilization of the Soviet KMP-2 Mining Machine in the Dimitrov Mine in the Brigadir Region", P. 16, (MINNO DELO, Vol. 9, No. 2, Feb. 1954, Sofiya, Bulgaria)

SO: Monthly list of East European Accessions, (EFAL), LC, Vol. 4, No. 1, Jan. 1955, Uncl.

POPIVANOV, D.; IVANOV, V.

POPIVANOV, D.; IVANOV, V. Replacing the wooden mine timbering with metal props in the combine entrance pits of the Merichieri I Mine, Maritsa Basin State Mining Enterprise. P. 31.

Vol. 10, (i. e. 11) No. 4, July/Aug. 1956.

MINNO DELO

TECHNOLOGY

Sofia, Bulgaria

So: East European Accession, Vol. 6, No. 3, March 1957

POPIVANOV, D.

Papers on coal industry read at Plovdiv Fair this year. p. 104
(Minno Delo, Vol. 11, no. 6, Nov./Dec. 1956, Bulgaria)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 6, June 1957, Uncl.

POPIVANOV, D.

Scientific and Technical Conference on efficient utilization of our petroleum. p. 107.
(Minno Delo, Vol. 11, no. 6, Nov./Dec. 1956, Bulgaria)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 6, June 1957, Uncl.

POPIVANOV, D

"Reports submitted to us by German specialists."

p.109 (Minno Delo, Vol. 12, no. 2, Mar./Apr. 1957, Sofia, Bulgaria)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 8, August 1958

POPIVANOV, D.

"Exploitation of lignite coal by means of open-pit mining in Eastern Germany."

p.41 (Minno Delo, Vol. 12, no. 3, May/June 1957, Sofia, Bulgaria)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 8, August 1958

POPIVANOV, D.

"The Scientific Research Institute of the Coal Industry. "

p.23 (Minno Delo, Vol. 12, no. 5, Sept./Oct. 1957, Sofia, Bulgaria)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 8, August 1958

POPIVANOV, Iv.

Case of abdominal purpura (Schoenlein-Henoch's purpura) erroneously
diagnosed as acute abdomen. Khirurgiia, Sofia 8 no.6:556-558 1955.

(PURPURA, NONTHROMBOPENIC, differential diagnosis,
abdom.acute, errors)

(ABDOMEN, ACUTE, differential diagnosis,
purpura, nonthrombopenic, errors)

POPIVANOV, I.

Observations on a case of acute Addison's disease with the picture
of surgical acute abdomen. Khirurgia, Sofia 8 no.8:745-747 1955.

(ADDISON'S DISEASE, differential diagnosis,
abdom., acute)

(ABDOMEN, ACUTE, differential diagnosis,
Addison's dis.)

POPIVANOV, Iv.

Acute abdomen of vascular origin. Khirurgiia, Sofia 9 no.7-8:
661-668 1956.

(INTESTINES, SMALL, blood supply,
 vasc. dis. causing acute abdom. (Bul))
(ABDOMEN, ACUTE, etiology and pathogenesis,
 vasc. disord. of small intestine (Bul))

POPIVANOV, I.

"Frequency and lethality of acute pancreatitis."

IZVESTIIA. SERIJA EKSPERIMENTALNA BIOLOGIJA I MEDITSINA, Sofia, Bulgaria,
No. 1, 1957.

Monthly List of East European Accessions Index (EEAI), The Library of
Congress, Volume 8, No. 8, August 1959.

Unclassified

LUKANOV, A.; POPIVANOV, I.

Tissue, bacteria, infection. Khirurgiia, Sofia 10 no.12:1057-1064 1957.

1. Institut za burza meditsinska pomoshch "N. I. Pirogov"--sofiia Gl.

lekar: B. Dayetakov.

(INFECTION, physiology

tissue & bacteriol. factors (Bul))

POPIVANOV, Iv.

Acute pancreatitis. Suvrem.med., Sofia 2 no.1:117-125 '60.
(PANCREATITIS)

POPEVANOVA, Iv.

Preparation, time and extent of surgical intervention in
patients in the state of shock. Khirurgiia (Sofia) 17
no. 58557-588 1961

BULGARIA

Iv. POPIVANOV and N. KOVACHEVA, Institute for Emergency Medical Aid
(Institut za burza meditsinska pomoshch) "N.I.Pirogov", Medical
Director (glavni lekar) Khr. ZDRAVKOV, [Sofia.]

"Diagnostic and Prognostic Significance of the Serum Diastase Levels
in Acute Pancreatitis."

Sofia, Suvremenna Meditsina, Vol 14, No 2, 1963; pp 28-36.

Abstract [English summary modified]: Serum and urinary diastase
patterns during the early hours and days of acute pancreatitis are
stated to have virtually pathognomonic value. Polemical review of
the literature controversy on this topic. Five brief case reports;
6 graphs; Nine Soviet and 13 Western references.

BULGARIA

IV. POPIVANOV, Institute for Emergency Medical Aid (Institut za burza
meditsinska pomoch) "D.Y. Litakov" Head Physician (glaven lekar)
Khr. ZDRANKOV.

"Trasyolol in the Treatment of Acute Pancreatitis."

Sofia, Sovremenna Meditsina, Vol 13, No 9, 1962; pp 14-20.

Abstract [English summary modified]: Reports treatment of 25 (24 acute)
patients with pancreatitis using this German-made kallikrein-trypsin
inactivator; all recovered. Excellent results even though both dose
and duration of treatment had to be reduced due to lack of drug. Six
case reports, 15 diagrams, 6 German references.

1/1

POPIVANOV, Iv., doktor (Bolgariya, Sofiya, 6, ul. Brat'ya Pashovy, 1/1);
~~DIMOV~~, G., doktor (Bolgariya, Sofiya, 6, ul. Brat'ya Pashovy
1/1); KOVACHEVA, N., doktor (Bolgariya, Sofiya, 6, ul. Brat'ya
Pashovy, 1/1)

Complications in acute pancreatitis. Vest.khir. 90 no.3:
71-77 Mr'63. (MIRA 16:10)

1. Instituta skoroy meditsinskoy pomoshchi imeni N.I.Pirogova
(glavnyy vrach - doktor Khr.Zdravkov), g.Sofiya.
(~~PANCREAS~~-DISEASES)

POPIVANOV, Iv.; KOVACHEVA, N.

Diagnostic and prognostic significance of diastase in acute
pancreatitis. Suvr. med. 2:28-36 '63.

(PANCREATITIS) (AMYLASE)

POPIVANOV, Iv.

Trasyolol in the treatment of acute pancreatitis. Khirurgiia 15
no.9/10:944-947 '62.

1. Iz Instituta za burza meditsinska pomosht "N.I. Pirogov".
(PANCREATITIS) (KALLIKREAN)

SIMEONOV, A.; POPIVANOV, Iv.; GANCHEV, G.

Urinary and blood diastase changes in acute diseases of abdominal organs. Khirurgiia, Sofia 14 no.7:593-598 '61.

1. Institut za burza meditsinska pomosht "N. I. Pirogov", Sofia.
Gl. lekar Khr. Zdravkov.

(ABDOMEN ACUTE metab)

POPIVANOV, I.

Causes and principles of surgical treatment of acute pancreatitis. Khirurgia 16 no.1:61-70 '63.

1. Institut za burza meditsinska pomosht "N.I. Pirogov" -
Sofia. Gl. lekar: Khr. Zdravkov.
(PANCREATITIS) (BILIARY TRACT)

POPIVANOV, Iv.; DIMOV, G.; KOVACHEVA, N.

On complications in acute pancreatitis. Khirurgia 15 no.9/10:
938-944 '62.

1. Iz Instituta za bursa meditsinska pomosht "N.I. Pirogov.
(PANCREATITIS)

POPIVANOV, Iv.

Trasyolol in the treatment of acute pancreatitis. Suvr. med.
13 no.9:14-20 '62.

(PANCREATITIS) (KALLIKREIN)

DIMOV, G.; POPIVANOV, Iv.

On changes in internal organs in acute pancreatitis and their pathogenic interpretation. Khirurgiia, Sofia 14 no.2/3:361-362 '61.

1. Institut za burza meditsinska pomosht "N. I. Pirogov".

(PANCREATITIS compl)

POPIVANOV, Iv.; DIMOV, G.

The acute pancreas, polyvisceral syndrome. Izv biol med BAN 3 no.4:
43-50 '60. (EEAI 10:3)

1. Institut za burza meditsinska pomosht "N.I.Pirogov," Sofia.
(Glaven lekar: Khr. Zdravkov)
(PANCREAS)

POPIVANOV, Iv.; DIMOV, G.

Cholecystepancreatitis (biliopancreatitis). Khirurgiia, Sofia
13 no.2-3:168-171 '60.

1. Iz Instituta za burza medicinska pomošt "N.I.Pirogov" -Sofia.
(PANCREATITIS compl.)
(CHOLECYSTITIS compl.)

POPIVANOV, R.

Popov, M., Popivanov, R., "The Problem of the Unspecified Immunostimulant of TAB Antibodies." p.185 (IZVESTIYA, Vol. 2, 1951, Sofiya.)

SO: Monthly List of East European Accessions, Vol. 3, No. 3, Library of Congress, March 1954, Uncl.

POPIVANOV, R.

"Contribution to the Problem of Rh Factor Distribution in Bulgaria." p.205
(IZVESTIIA, Vol 2, 1951, Sofiya.)

SO: Monthly List of ^{East European} ~~Russian~~ Accessions, / Vol. 3 No. 3, Library of Congress, March 195⁴9, Uncl.

POPIVANOV, R.

"Isosensitization of a Mother by ABO Incompatible Pregnancy." p.257 (IZVESTIYA,
Vol. 2, 1951, Sofiya.)

SO: Monthly List of ^{East European} ~~Russian~~ Accessions, / Vol. 3, No. 3, Library of Congress, March ¹⁹⁵¹ ~~1953~~, Uncl.

POPIVANOV, Radoi

Studies on prevention of hemolytic disease in newborn. Doklady Bolg.
akad. nauk 5 no.2-3:41-44 Apr-Dec 52.

(ERYTHROBLASTOSIS, FETAL, prevention and control.)

POPIVANOV, R.

"Studies on the Prophylaxis of Hemolysis of the Newborn." p. 105, Izvestiia, Sofiya, Vol. 3, 1953

SO: East European Accessions List, Vol. 3, No. 9, September 1954, Lib. of Congress

POPIVANOV, R., prof.

reproduction prohibited

Life and activities of academician Metodii Popov. Sovrem. med.,
Sofia 5 no.5:3-6 1954.

(BIOGRAPHIES,

Popov, Metodii)